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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,423	07/02/2003	Richard O. Moore JR.	005950-776	5140

7590 06/28/2007
BURNS, DOANE, SWECKER & MATHIS, L.L.P.
P.O. Box 1404
Alexandria, VA 22313-1404

EXAMINER

NGUYEN, TAM M

ART UNIT	PAPER NUMBER
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1764

MAIL DATE	DELIVERY MODE
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06/28/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/613,423

Applicant(s)

MOORE ET AL.

Examiner

Tam M. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 5-12 and 14-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5-12 and 14-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 18, 2007 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 2, and 5-11, 13, 14, 16, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ackerman (US 5,527,473) in view of Kolling et al. (US 2,852,546).

The Ackerman reference discloses a process in which a product stream from an F-T process, which would necessarily contain C3+ hydrocarbons, is filtered to remove contamination. The filter can be designed to remove contaminants (i.e., catalysts) that range in size between 0.5 and 100 microns. It is the examiner's position that the claimed conventional pressure filter does not distinguish over the filter of Ackerman. The Ackerman reference then discloses that the filtered stream is passed to a fractionator (i.e., distillation column) from which multiple streams are recovered. One or more of these streams may be recycled. Since the stream passed to the fractionator in the Ackerman process is the same as in the claimed process (i.e., a filtered F-T product), the contaminants would necessarily be concentrated in the bottom stream recovered from the fractionator. See column 3, lines 43-60; column 4, lines 5-18; column 9, lines 11-33; and Figure 10.

The Ackerman reference does not disclose the claimed first and second distillation steps.

The Kolling reference discloses the distillation of a product from an F-T process. The process comprises two-stage distillation with the second stage being operated under reduced pressure (i.e., vacuum distillation). See column 2, lines 24-46.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Ackerman by distilling as suggested by Kolling because different distillates would be obtained.

The Ackerman reference does not disclose volume percent of the filtered hydrocarbon, the percent of contamination isolated in the second bottom fraction, and boiling ranges for the fractions.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Ackerman by adjusting the distillation conditions to produce products of as claimed because it is within the level of one of skill in the art to operate the distillation zone to produce any hydrocarbon fraction including fractions as claimed.

Ackerman does not specifically disclose that the filtering means is a conventional filter. However, the limitation "a conventional filter" would include any known filter including the Ackerman filter. Alternatively, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Ackerman by utilizing a conventional filter because any filter means, which is capable of removing contaminations having an average size 0.5 to 100 microns, can be used in the process.

Claim 12, 15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ackerman (US 5,527,473) as applied to claim 1 above, and further in view of Brennan et al. (US 4,605,678).

As discussed above, the Ackerman reference does not disclose the hydroprocessing of a distillate product.

The Brennan reference discloses a process for removing catalyst fines from a F-T product. The process comprises passing the product through a filter to remove the fines. Brennan

also discloses that the product may be further upgraded by hydrotreating. See column 5, lines 46-68.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Ackerman by further hydrotreating a distillate product as suggested by Brennan because an upgraded product will result.

Response to Arguments

The argument that Ackerman does not disclose or suggest that any further removal of catalysts or solids of fine sizes is needed is not persuasive because Ackerman teaches that further removing contaminants from the liquid produce is needed. (See col. 9, lines 22-26)

The argument that the wire filter element of Ackerman is not a conventional filter is not persuasive because the limitation “a conventional filter” would include any known filter including the filter of Ackerman. Also, it would be obvious it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Ackerman by utilizing a conventional filter because any filter means, which is capable of removing contaminations having an average size 0.5 to 100 microns, can be used in the process.

The argument that Ackerman does not disclose or suggest distilling to remove contamination present as soluble species or as ultra-fine particulate by using two distillation steps nor does Ackerman disclose or suggest that the bottom fraction is less than about 35 percent by volume of the filtered hydrocarbon stream is not persuasive. Since the feedstock of Ackerman is similar to the claimed feed, it would be expected that the filtered hydrocarbon stream of Ackerman would comprise soluble species or ultra-fine particulate as claimed. In

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addition, it have been modified that the filtered hydrocarbon stream passed to the distillation steps of Kolling which is the similar to in the claimed process. It would be expected that the contaminants would necessarily be concentrated in the bottom stream recovered from the distillation columns as claimed. Also, the examiner maintains that it would have been obvious to one having ordinary skill to have modified the process of Ackerman by adjusting distillation conditions to produce products of desired purity and composition.

The argument that Kolling discloses an atmospheric distillation followed by a vacuum distillation followed by a vacuum distillation as a separation technique to provide desired Fischer-Tropsch products, not to remove contamination is not persuasive. The examiner relied upon Kolling to teach that the distillation of the product from an F-T process, which comprises two-stage distillation with the second stage being operated under reduced pressure, (i.e., vacuum distillation) is known in the art. As discussed above, the contaminants would necessarily be concentrated in the bottom stream recovered from the distillation columns as claimed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tam M. Nguyen whose telephone number is (571) 272-1452. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tam M. Nguyen
Examiner
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A handwritten signature in black ink, appearing to read 'Tam', is written over a horizontal line.

TN